WHAT IS CLAIMED IS:

1   1.   A method for continuous allocation of real-time

2   traffic in a communication network, comprising the steps of:

3   allocating a first unit of real-time data for transmission

4   during a first interval with a first transmission rate;

5   allocating non-real-time data for transmission during a

6   second interval;

7   allocating a second unit of real-time data for transmission

8   during a third interval with a second transmission rate; and

9   allocating a third unit of real-time data for transmission

10   during said third interval with said second transmission rate.

11   2.   The method of Claim 1, wherein said real-time data

12   includes speech data.

13   3.   The method of Claim 1, wherein each said first unit,

14   second unit and third unit of real-time data comprises a

15   respective 20 ms signal output from a speech codec.

1   4.   The method of Claim 1, wherein said communication

2   network comprises a TDMA communication network.

3   5.   The method of Claim 1, wherein each of said intervals

4   comprises a block in a timeslot.

5   6.   The method of Claim 1, wherein said first transmission

6   rate comprises a transmission at a full-rate.

7   7.   The method of Claim 1, wherein said first transmission

8   rate is a higher rate than said second transmission rate.

9   8.   The method of Claim 1, wherein said second

10   transmission rate comprises a transmission at a half-rate.

11   9.   The method of Claim 1, wherein said non-real-time data

12   comprises control data.

1   10. A method for continuous allocation of real-time

2   traffic in a communication network, comprising the steps of:

3   allocating a first unit of real-time data for transmission

4   during a first interval with a first transmission rate;

5   allocating non-real-time data for transmission during a

6   second interval;

7   allocating a second unit of real-time data for transmission

8   during said second interval with a second transmission rate; and

9   allocating a third unit of real-time data for transmission

10   during said second interval with said second transmission rate.

11   11. The method of Claim 10, wherein the step of allocating

12   said non-real-time data further comprises allocating said non-

13   real-time data for a first timeslot, and the steps of allocating

14   said second unit of real-time data and said third unit of real-

15   time data further comprises allocating said second unit of real-

16   time data and said third unit of real-time data for a second

17   timeslot.

35

1   12.   The method of Claim 10, wherein said first and second

2   units of real-time data are allocated to a first user, and said

3   third unit of real-time data is allocated to a second user.

4   13.   The method of Claim 10, wherein said real-time data

5   includes speech data.

6   14.   The method of Claim 10, wherein each of said first

7   unit, second unit and third unit of real-time data comprises a

8   respective 20 ms signal output from a speech codec.

9   15.   The method of Claim 10, wherein said communication

10   network comprises a TDMA communication network.

11   16.   The method of Claim 10, wherein said communication

12   network comprises a Compact EDGE network.

1   17.   The method of Claim 10, wherein each of said intervals

2   comprises a block in one or more timeslots.

3   18.   The   method   of   Claim   10,   wherein   said   first

4   transmission rate comprises a transmission at a full-rate.

5   19.   The   method   of   Claim   10,   wherein   said   first

6   transmission rate is a higher rate than said second transmission

7   rate.

8   20.   The   method   of   Claim   10,   wherein   said   second

9   transmission rate comprises a transmission at a half-rate.

10   21.   The method of Claim 10, wherein said non-real-time

11   data comprises control data.

1   2₂. A method for continuous allocation of real-time

2   traffic in a communication network, comprising the steps of:

3   allocating a first unit of real-time data for transmission

4   during a first interval with a predetermined transmission rate;

5   allocating a second unit of real-time data for transmission

6   during said first interval;

7   allocating non-real-time data for transmission during a

8   second interval;

9   determining if said second interval is not contiguous with

10   said first interval; and

11   if said second interval is not contiguous with said first

12   interval, allocating a third unit of real-time data and a fourth

13   unit of real-time data for transmission during a third interval

14   with said predetermined transmission rate, and allocating a

15   fifth unit of real-time data and a sixth unit of real-time data

16   for transmission during a fourth interval with said

17   predetermined transmission rate, said third interval contiguous

1   with said second interval, and said fourth interval contiguous

2   with said third interval.

3   23.   The method of Claim 22, wherein said first unit of

4   real-time data includes speech data.

5   24.   The method of Claim 22, wherein each of said first

6   unit, second unit, third unit, fourth unit, fifth unit and sixth

7   unit of real-time data comprises a 20 ms signal output from a

8   speech codec.

9   25.   The method of Claim 22, wherein said communication

10   network comprises a TDMA communication network.

11   26.   The method of Claim 22, wherein said communication

12   network comprises a Compact EDGE network.

IPDAL:756780.1   34647-00411USPT

1   27.   The method of Claim 22, wherein each of said intervals

2   comprises a block in a timeslot.

3   28.   The method of Claim 22, wherein said predetermined

4   transmission rate comprises a transmission at a half-rate.

5   29.   The method of Claim 22, wherein said non-real-time

6   data comprises control data.

40

1   30. A system for continuous allocation of real-time

2   traffic, comprising:

3   a network control unit; and

4   a terminal unit coupled to said network control unit by a

5   transmission medium, said network control unit further

6   comprising:

7   means for allocating a first unit of real-time data for

8   transmission during a first interval with a first transmission

9   rate;

10   means for allocating non-real-time data for transmission

11   during a second interval;

12   means for allocating a second unit of real-time data for

13   transmission during a third interval with a second transmission

14   rate; and

15   means for allocating a third unit of real-time data for

16   transmission during said third interval with said second

17   transmission rate.

1   31.   The system of Claim 30, wherein said first unit of

2   real-time data includes speech data.

3   32.   The system of Claim 30, wherein each of said first

4   unit, second unit and third unit of real-time data comprises a

5   20 ms signal output from a speech codec.

6   33.   The system of Claim 30, wherein said system comprises

7   a TDMA communication system.

8   34.   The system of Claim 30, wherein said system comprises

9   a Compact EDGE communication system.

10   35.   The system of Claim 30, wherein each of said intervals

11   comprises a block in a timeslot.

12   36.   The system of Claim 30, wherein said first

13   transmission rate comprises a transmission at a full-rate.

1   37.   The   system   of   Claim   30,   wherein   said   first

2   transmission rate is higher than said second transmission rate.

3   38.   The   system   of   Claim   30,   wherein   said   second

4   transmission rate comprises a transmission at a half-rate.

5   39.   The system of Claim 30, wherein said non-real-time

6   data comprises control data.

1   40. A system for continuous allocation of real-time

2   traffic, comprising:

3   a network control unit; and

4   a terminal coupled to said network control unit by a

5   transmission medium, said network control unit further

6   comprising:

7   means for allocating a first unit of real-time data for

8   transmission during a first interval with a first transmission

9   rate;

10   means for allocating non-real-time data for transmission

11   during a second interval;

12   means for allocating a second unit of real-time data for

13   transmission during said second interval with a second

14   transmission rate; and

15   means for allocating a third unit of real-time data for

16   transmission during said second interval.

44

1   41. A system for continuous allocation of real-time

2   traffic, comprising:

3   a network control unit; and

4   a terminal coupled to said network control unit by a

5   transmission medium, said network control unit further

6   comprising:

7   means for allocating a first unit of real-time data for

8   transmission during a first interval with a predetermined

9   transmission rate;

10   means for allocating a second unit of real-time data for

11   transmission during said first interval;

12   means for allocating non-real-time data for transmission

13   during a second interval;

14   means for determining if said second interval is not

15   contiguous with said first interval, and if said second interval

16   is not contiguous with said first interval, allocating a third

17   unit of real-time data and a fourth unit of real-time data for

18   transmission during a third interval with said predetermined

45

1   transmission rate, and allocating a fifth unit of real-time data

2   and a sixth unit of real-time data for transmission during a

3   fourth interval with said predetermined transmission rate, said

4   third interval contiguous with said second interval, and said

5   fourth interval contiguous with said third interval.